



USAID
FROM THE AMERICAN PEOPLE

TECHNICAL ASSISTANCE FOR THE E-TENDER INITIATIVE IN KYIV, UKRAINE (PHASE ONE) DELIVERABLE 2: TECHNICAL & BUSINESS RECOMMENDATIONS AND PLAN



ПРИЄДНАТИСЬ ДО ПРОЕКТУ ПЕРЕВАГИ СИСТЕМИ НАШІ ЗАМОВНИКИ БЛОГ ПІДТРИМКА КОНТАКТИ

PROZORRO

PROZORRO – система, створена з ініціативи громадських організацій, комерційних майданчиків, державних органів та підприємців. Наша мета – прозоре і ефективне витрачання державних коштів, а також запобігання корупції завдяки громадському контролю та розширенню кола постачальників

РИНОК ДЕРЖАВНИХ ЗАКУПІВЕЛЬ УКРАЇНИ



JUNE 19, 2015

This publication was produced for review by the United States Agency for International Development. It was prepared by Tato Urjumelashvili, David Marghania and Yuriy Gromov, Management Systems International.

TECHNICAL ASSISTANCE FOR THE E-TENDER INITIATIVE IN KYIV, UKRAINE (PHASE ONE)

DELIVERABLE 2: TECHNICAL & BUSINESS RECOMMENDATIONS AND PLAN



Management Systems International
Corporate Offices
200 12th Street, South
Arlington, VA 22202 USA
Tel: + 1 703 979 7100

Contracted under AID-121-O-15-00012

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

CONTENTS

Acronyms.....	1
Introduction.....	2
Plan for Kyiv City Implementing ProZorro	3
Parameters for Rolling Out ProZorro to Other Cities	9
Support to Further Development of ProZorro	10

ACRONYMS

AWS	Amazon Web Services
BI	Business Intelligence
CDB	Central Database
CPV	Common Procurement Vocabulary
EDS	Electronic Digital Signature
EU	European Union
GoU	Government of Ukraine
GPA	Agreement on Government Procurement
IDPS	Integrated Data Protection System
KMDA	Kyiv City State Administration
LOE	Level of Effort
MEDT	Ministry of Economic Development and Trade
MSI	Management Systems International
MVP	Minimum Viable Product
TOR	Terms of Reference
UNCITRAL	United Nations Commission on International Trade Law
USD	U.S. Dollars
WTO	World Trade Organization

INTRODUCTION

This report is Deliverable 2 under the Technical Assistance for the E-Tender Initiative in Kyiv, Ukraine (Phase One) project. Deliverable 1 provided an analysis of the technical and business requirements of stakeholders of public procurement regarding e-procurement. It matched and compared these requirements with the functionality and capabilities of the ProZorro system, as well as recommended additions and changes of system functionality for successful and effective implementation of e-procurement in the Kyiv City State Administration (KMDA) and other public institutions in Ukraine.

This deliverable provides a plan for implementing e-procurement in KMDA and recommendations for modifications and implementation of a national electronic procurement solution with ProZorro.

PLAN FOR KYIV CITY IMPLEMENTING PROZORRO

Deliverable I identified the needs of KMDA for successful implementation of the e-procurement system, which include:

- Training the procurement specialists of KMDA in using the ProZorro system,
- Developing internal policies and procedures of KMDA adapted for e-procurement,
- Developing manuals and forms to standardize procurement processes and
- Developing the content of systematic reports for analysis and monitoring of procurement conducted by procurement units and to train relevant staff of KMDA.

Table I provides a description of the activities that need to be implemented to address these needs and a timeframe for the implementation of the activities.

Table 1: KMDA e-procurement implementation plan

#	Activity Type	Description of Activity	Time Frame
1	Procurement Training	<ul style="list-style-type: none"> Procurement specialists from each of 1,600 structural units and subsidiaries of KMDA must be trained before moving to ProZorro. Procurement professionals' competence will play a significant role in successful implementation of the reform. Technical assistance in development and implementation of training programs will be increasingly important. Training programs will be needed for both existing staff and for new employees in the future. These programs will also be useful for other cities and government agencies that will join ProZorro. 	2015 –2016
		<ul style="list-style-type: none"> Two trainings for the staff of the KMDA unit responsible for business analytics. At least 23 regional trainings (one for each region) for other municipalities will be needed when ProZorro is rolled out to all regions of Ukraine. 	Nov. 2015
2	Manuals and Forms	<p>KMDA needs to develop and implement manuals and forms to standardize procurement processes. The manuals must provide at least the description of the current public procurement policy of Ukraine, the procurement methods provided by ProZorro, instructions for bidders, templates of the standard tender documentation, checklists, etc. In implementing systems like ProZorro, it is of utmost importance to address topics that are not traditionally regulated by the procurement laws and regulations: needs assessment, planning, market survey, contract management, performance measurement and analysis. These should be reflected in the procurement guiding documents.</p> <p>We also advise analysis of the procurement structure for KMDA and its subsidiaries and identification of the 50 most frequently procured goods and services. This will elaborate the standardized, universal, neutral and non-discriminatory technical and qualitative requirements that might be used for creation of the tender documentation. The availability of standardized technical descriptions will not only be a great help for procuring entities, which experience problems with the hiring of qualified and well-paid procurement specialists, but will create a predictive and transparent environment for the bidders, which will be able to better prepare for the tenders. A sample document is provided at the following link:</p> <p>https://drive.google.com/file/d/0B4PDspfAv-zZNmRiYyIKdDU0dWM/view?usp=sharing</p>	Sept. – Nov. 2015

4	Internal regulations	Currently, ProZorro can be used by KMDA and its subsidiaries for procurements below the threshold. Such procurements are not regulated at the national or municipal levels. The GoU is moving forward with legislation that would allow using ProZorro for procurement above the threshold amounts. Although some deadlines for adopting the new legislation have passed, the legislation is expected to be adopted within several months. When the legislation passes, corresponding changes will need to be made in the internal procurement regulations of KMDA and its subsidiaries.	Sept. – Nov. 2015
2	Business Analytics	<p>Analysis and measurement of procurement performance is a cornerstone of effective and efficient spending of public funds, and proper planning, management and execution of public procurement is impossible without it. The interviews with the KMDA management and other pilot procuring entities revealed the need for a sophisticated and detailed analytical system. Business intelligence (BI) will enable monitoring and measuring of public procurement through in-depth analysis of behavior patterns and red flags in predefined cases. Considering this, it is important to have systemic reports for analysis and monitoring of procurement conducted by KMDA and its structural units and subsidiaries. These systemic reports will contain different variables and figures, including the following:</p> <ol style="list-style-type: none"> 1. Average number of potential bidders per tender over time; 2. Price ratio (i.e., bid price divided by expected value) of winning bids over time; 3. Average price ratio of all bids over time, aggregated over all Common Procurement Vocabulary (CPV) codes; 4. Average price ratio of winning bids as a function of the number of bidders; 5. Average price ratio for a procurement entity, divided by the average price ratio of all procurement entities, aggregated over all CPV codes; 6. Average price ratio for a procurement entity, divided by the average price ratio of all procurement entities; 7. Number of percentage changes in contracts (e.g., contract values); and 8. Unit price and average unit price. <p>Information about procurement must be publicly available and free on a dedicated page on the ProZorro website. (See more in Table 3.)</p>	Sept. –Nov. 2015

Interviews with management and procurement specialists of KMDA and state-owned enterprises (subordinate to the KMDA), as well as analysis of the system, showed that the main technical and business requirements of KMDA for an e-procurement system largely coincide with existing functionality of ProZorro. At the same time, some of the functions outlined by the representatives of the KMDA are not yet provided in ProZorro, though some of them are included in its development plan. The creation of additional functionalities, provided in Table 2, will be beneficial not only for KMDA, but for other users of ProZorro as well.

Table 2: Technical and functional upgrades of ProZorro needed to address business and technical requirements of KMDA

No	Function	Description and System Requirements	Current status	Needs input from
1	Geographical location of users	Modify data control from the central database (CDB) platforms to visualize location data of suppliers and customers. Google Maps layers, indexing by postal (ZIP) codes, cadastral maps and other available data might be used for these purposes during user registration.	Procuring entities have the attributes of legal address and shipping address, which indicate their geographic location. Suppliers also have location data that can be used to visualize reporting data.	<ul style="list-style-type: none"> • ProZorro¹ • Procurement experts • Quinta Group • Private platforms
2	Structural affiliation of the users	Add the relevant fields to the user registration module and refine the search filters to specify the structural affiliation of the procuring agency (i.e., structural hierarchy).	ProZorro does not provide the information on the structural affiliation of procuring entities and suppliers.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
3	Multi-profiles of users and their roles	Implement multi-profiles of purchasing units (user management) with the possibility of assigning the roles and responsibilities. Only authorized users will be able to modify or amend the bidding documents or other documents. Log files will be available upon request. This will create the ability to monitor and manage the procurement process of the procuring units accountable to KMDA.	No options exist to assign the roles and responsibilities to individual authorized users, acting in the system on behalf of the procuring entities and suppliers.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
4	Notifications	Provide the ability to track and notify (via SMS or email) all interested parties about the status of a tender and any other changes to the procurement process.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms

¹ ProZorro management and coordination team

5	Planning module	Planning module allows for posting annual procurement plans by each participating agency. ProZorro does not provide automatic notification services for its customers. This functionality will help suppliers understand market capacity and plan their operations.	ProZorro does not provide special dedicated workflow for the creation of annual public procurement plans.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
6	Multi-lot functions	Introduce multi-lot function, providing the possibility to split one purchase to different lots, which can have different characteristics (e.g., different delivery point) and can have different winners. Also, this functionality should have the built-in limitations for purchasers, preventing or detecting fraud with the artificial and unnecessary split of one purchase to different lots.	ProZorro does not provide the possibility to divide tenders into smaller lots; every lot is tendered as a separate procurement.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
7	Web-based contract signing	Implement an electronic contract through a fill-out form using information on the supplier and procurement agency available in the system, and introduce a standardized form for the specification of the good and services to be procured. Such a contract can be certified by parties' electronic digital signature (EDS) or free online signature makers. Electronic signature use will not be mandatory. Contract data can later be used to generate treasury payment functions. Contract tracking will register the status of the contract implementation, delivery of goods/services and payments to suppliers.	<p>Not developed.</p> <p>Contracts are publicly available online in ProZorro, but the data from the contracts is not retrievable for analysis because contracts are signed offline, scanned and then uploaded into the system.</p>	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
8	Blacklist	Monitoring of the implementation of agreements on the use of the system and the right to participate in public procurement should be implemented at the level of CDB. This would allow the system to ban participants who have violated the rules of the procurement process and create a "blacklist" of dishonest suppliers. The rules and procedures of inclusion of suppliers into the blacklist should be determined by normative acts of the	<p>Not developed.</p> <p>Ukrainian legislation does not provide direction on exclusion of dishonest suppliers from participation in procurement procedures. This practice is widely used by other countries and international organizations.</p>	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms

		authorized body or the national legislation and disclosed in the user agreement. This list should be publicly available.		
9	Visualization of qualification and technical requirements	Allow the possibility to set technical and qualification criteria through dedicated Web form instead of as a part of the document in PDF. This will allow the use of Web forms to formulate technical requirements for suppliers, such as experience, turnover, qualifications, education, financial standings, etc. This functionality will facilitate more sophisticated analytics, which will allow continuous improvement of the business logic behind the process.	<p>Not developed.</p> <p>Technical and qualification requirements are provided in tender documents that are uploaded to the system. As there are no strict rules on the order and placement of these requirements in the procurement documents, they often appear in different parts of the document and are hard to find. It is also difficult to process and analyze such requirements for statistical purposes.</p>	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms

PARAMETERS FOR ROLLING OUT PROZORRO TO OTHER CITIES

As Deliverable I indicated, only two municipalities (Kyiv and Lviv) and government agencies participate in piloting ProZorro. These cities' experience will be invaluable for the expansion of the system to other cities in Ukraine. Different cities' level of readiness to use the system will be uneven both from a technological point of view and in terms of training of procurement specialists, as well as potential suppliers. Also, resistance from administrative authorities is possible, as it often occurs in response to innovation.

The following parameters need to be considered when planning the activities and estimating the costs of rolling out the system to each municipality:

- Assessing technological readiness of a municipality for the transfer to ProZorro, including the availability of the necessary computer equipment and software, internal network and its maintenance and the Internet connection quality, and enhancing a municipality's technical equipment as necessary.
- Training and mentoring staff at all levels, including management, personnel involved in procurement and technical staff.
- Assisting with developing manuals and standard documents to use during the transition to the e-procurement system.
- Assessing suppliers' readiness to use ProZorro, ensuring that access to the system is not hindered by insufficient technical means. Consider providing a centralized facility within municipalities — service centers — for suppliers with insufficient technical capacity to use ProZorro.

SUPPORT TO FURTHER DEVELOPMENT OF PROZORRO

As discussed in Deliverable I, the present functionality of ProZorro includes the following modules:

- Registration and tender notices;
- Clarification (questions and answers);
- Electronic bid submission;
- Reverse auction; and
- Selecting the winner and publishing the contracts.

This is the functionality of the so-called minimum viable product (MVP) and ensures conducting only the basic procedures for open electronic tenders. As discussed, the development of ProZorro is scheduled in several phases. The objective of the initial phase of ProZorro was to test the entire cycle on a single procedure on a micro level (below the Ukrainian procurement threshold), which is not regulated by the law. This approach is much speedier and more effective than piloting several incomplete procedures that require longer administrative arrangements and legal changes. At this stage, the pilot is executed on one procedure: open electronic tender with reverse auction. More than 1,000 tenders by more than 100 procuring entities have been carried out. This allows analysis of the pilot outcomes to understand how to regulate mid-value procurement (below the EU threshold.) Depending on the results and taking into account the risk factors described in Deliverable I, the nationwide rollout of ProZorro will start after adoption of relevant legislation, expected by January 2016. This will be the start of the second phase to enable the use of electronic procedures for different types of procurements below the EU threshold that requires legal and functional upgrade of ProZorro. The third phase of ProZorro is the development of the functionality to be used for the procurement above the EU thresholds and thus complies with the corresponding requirements of the directives and other international best practices, such as the World Trade Organization's Agreement on Government Procurement (WTO GPA) and the United Nations Commission on International Trade Law (UNCITRAL) Model Law.

Table 3 provides a list of technical gaps that need to be addressed and new modules and functions to be developed for ProZorro to be fully functional and compliant with the international best practices.

Table 3: Technical and functional upgrades of ProZorro needed to address business and technical requirements of the National eProcurement System

No	Function	Description and System Requirements	Current status	Current developer
Priority I				
1.**	Appeal module	The process for independent processing of the complaints to increase trust to the system on a side of bidders.	Not developed. First draft on concept terms of reference (TOR) is developed. Need to approve TOR and start development of system code.	<ul style="list-style-type: none"> Procurement experts Quinta Group Private platforms ProZorro
2.	Automated testing tool	Automatic testing server will run robotized integrated testing of each system connected to ProZorro decrease number of errors in the system.	Not developed	<ul style="list-style-type: none"> ProZorro Quinta Group
3.	Logging system	Log server to record changes during the procurement process, including posting the procurement and any modifications, proposal submission time, any changes, IP addresses, etc. Storage of such information on a separate server will substantially decrease risks of manipulation or fraud.	Not developed.	<ul style="list-style-type: none"> ProZorro Procurement experts Quinta Group Private platforms
4.	System stability	Technical sustainability issues – implementation of primary and backup virtual servers on Amazon Web Services (AWS), implementation of distributed file storage on different Ukrainian data centers, etc. Will decrease impact of disasters and allow easier recovery in case of disasters.	Not developed.	<ul style="list-style-type: none"> ProZorro Quinta Group

No	Function	Description and System Requirements	Current status	Current developer
5.	ePayments of tender participation fee	ePayment module is developed in a pilot mode on the private platforms and needs further adjustments, reconsidering volume of the fee and moving from pilot into production.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms • Commercial banks
6.	Electronic bid bonds (guarantees)	Bid bonds (guarantees) of tender proposals will be used in case of high-value (above GPA/EU thresholds) procurements. Enabling electronic tools for provision of guarantees will increase efficiency of public procurements and result in greater competition. In addition to developing this module, legislative changes will be introduced to promptly regulate provision of tender guarantees and the rules for their retention in case a bidder withdraws a proposal, as well as other cases, which will be clearly stipulated by Ukrainian legislation.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms • Commercial banks • Legal experts
7.	Enable platforms to run multiple versions of CDB	Parallel versions – ability of e-procurement platforms to use different versions of central database in parallel. It will allow easier management of software releases.	Not developed	<ul style="list-style-type: none"> • ProZorro • Quinta group • Private platforms
8.	Business intelligence(BI)	<p>The module will allow review of CDB data about tenders, bidders, bids, winners and disqualified bidders; export data in open formats; create analytical reports by specific tender parameters and visualize some analytical data in the form of diagrams.</p> <p>Information on tenders must be publicly available. ProZorro website must have a dedicated webpage with information of all aspects of the process of public procurement, which includes full data on public procurement, starting from creating an annual public procurement plan through implementation of public procurement contract. This site should also provide data on procuring entities, suppliers, their geography, product groups, tender status, etc. The real-time reports should be generated from the data available on ProZorro system through its CDB. For the purpose of measuring public procurement</p>	BI – developed in pilot module – needs licensing per user. Streamlining and review of logic of reports needed to improve accuracy of the reports	<ul style="list-style-type: none"> • ProZorro • Procurement experts • RBC Group • Quinta Group

№	Function	Description and System Requirements	Current status	Current developer
		<p>performance dynamics over past several years, it is highly recommended if the analytics web page also provides historical procurement data which is currently kept in an official journal, <i>Visnyk (Bichuk)</i>.</p> <p>For convenience, all data will be filtered by status of the tender, the CPV, the date of the tender or period of tendering, the procuring entity or supplier, region of the supplier or the procuring entity. The minimum information should include the following categories:</p> <ul style="list-style-type: none"> • Indicators: data visualization from ProZorro tender procedures on overall parameters of the tender and the planned amounts and savings, the average number of proposals for the trading with the possibility of filtering by the status of the tender, CPV and the procuring entity; • Procuring entities, i.e., metric averages of the procuring entity: the number of new tenders, the number of canceled procurement, savings, the average number of bidders, the average number of days for tender clarification; information on all suppliers participating in the procurement per and procurement CPV code per procuring entity; information on procuring entities' geography (regions and cities), the amount of the tenders, the planned amount of all purchases, and the number of completed tenders; • Suppliers: information on all bidders in ProZorro, similar to the information about procuring entities described above; • Tenders: information about the date of the announcement of a tender, the status of the tender, winner, the number of participants, the number of proposals, etc.; • Geography: a visual representation of the data on the digital map of Ukraine, including information the number of tenders and the planned value of procurement in each settlement; • Analysis: information on the average number of tender participants and tenders for CPV within time interval for tendering and tender status; and • Selections: informative reporting of the procurement of procuring entities to display the hierarchy of the procuring 		

No	Function	Description and System Requirements	Current status	Current developer
		entity, participating in tenders, CPV and planned cost.		
Priority 2				
9.	Archiving system	Archiving: automatic removal of documents from the main database to archive with the possibility to access archived data through all user interfaces.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Quinta group • Private platforms
10.	Planning module	Planning module allows for posting annual procurement plans by each participating procuring organization that would allow searching using different search parameters. This functionality will help suppliers to understand market capacity and plan their operations.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
11.	Interfaces for the visualization of main qualification and technical requirements	Possibility to set qualification criteria as fields in the document, not only as a part of the document in PDF. This will allow formulating technical requirements for suppliers, such as experience, turnover, qualification, education, financial standings, etc., using Web forms. This functionality will allow more sophisticated analytics, which will enable continuous improvement of the business logic behind the process.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
12.	Introduction of multi-lot tenders	Multi-lot purchases allow splitting one purchase into different lots, which can have different characteristics (e.g., different delivery point) and can have different winners. Also, this functionality should have built-in limitations for purchasers, preventing or detecting frauds with artificial and unnecessary split of one purchase to different lots.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
13.	Module for two-stage tenders, to take into account quality criteria considerations (Open tender with pre-qualification according to EU rules)	Two-level tenders will introduce quality indicators to assess proposals and will affect calculation of final price of tenders. This functionality is needed for more complicated purchases, when the winner cannot be identified based on price only (e.g., professional services, construction works, etc.) This functionality is known to the EU law as “open tender with pre-qualification” – where at the first stage qualification of suppliers takes place with scoring and technical evaluation with multi criteria. Afterward, ranking takes place as a result of electronic reverse auction.	Not developed.	<ul style="list-style-type: none"> • ProZorro • Procurement experts • Quinta Group • Private platforms
14.	Contract management	Possibility to sign contracts inside the system with the integrated free	Not developed.	<ul style="list-style-type: none"> • ProZorro

No	Function	Description and System Requirements	Current status	Current developer
	module for entire contract lifecycle	online solutions for digitally signing, without making use of digital signatures mandatory. Furthermore, contract tracking will register status of the contract implementation, delivery of goods/services and payments to suppliers.		<ul style="list-style-type: none"> Procurement experts Quinta Group Private platforms
15.	Integrated Data Protection System (IDPS-KC3И)	Information security: needed particularly before transferring ProZorro to the government organization to receive an authorization from the respective state body "Spec Sviaz."	Not developed.	<ul style="list-style-type: none"> ProZorro ProZorro Management/MED T Quinta Group Private Platforms
16.	Reporting module for negotiated procedures (direct contracts)	Through this module, the procuring entities will upload information into the system on types of procurement (e.g., direct contracts), that was not previously available online. This module will ensure the integrity of the public procurement data.	Not developed.	<ul style="list-style-type: none"> ProZorro Procurement experts Quinta Group Private platforms
17.	Module for the Framework Agreements (FAs) Dynamic Purchasing System and electronic catalogues	Module for the Framework Agreements will be used by the procuring entities to carry out the framework tenders and establish an agreement with one or several suppliers on terms governing contracts that may be awarded during the life of the agreement (as a rule, 2+1+1 years). FA is not a contract; a contract is made only when the order is placed by the individual procuring entity.	Not developed.	<ul style="list-style-type: none"> ProZorro Procurement experts Quinta Group Private platforms

*The system may have other modules as described in Deliverable I, e.g., Search, Deposit Guarantee and Blacklist, among others.

**Numeric values assigned to each function are based on categorization, not level of importance.